Regional Bobwhite Quail and Cottontail Rabbit Survey 2013

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Abstract

Wildlife managers and volunteers have been running bobwhite quail whistling counts for over sixty years in Western and Southern Wisconsin. Data on male bobwhite quail densities were collected biennially since 1991 in 15 counties comprising the species' primary range in Wisconsin. Populations showed a slight increase in 2013, with the overall trend a significant decline. The mean number of whistling males heard per stop was 0.015 in 2013, up from 0.013 whistles heard per stop in 2011. The number of cottontail rabbits seen per stop while running the quail survey was 0.17 per stop, an increase from 2011 level of 0.14.

Methods

Department personnel ran roadside surveys along predetermined transects in 15 counties across Wisconsin's primary bobwhite quail range. Annual surveys began in 1949, and have been run biennially since 1991. The surveys took place between 15 June and 5 July, beginning at sunrise on mornings with less than 40% cloud cover and winds less than 5mph. Surveyors made 20 stops approximately one mile apart, and recorded at each stop the number of whistling males heard during a two-minute period. The number of cottontail rabbits seen while running the transect was also recorded. The data were entered into the DNR production server and analyzed using the Statistical Analysis System (SAS).

Results

Whistling bobwhite quail routes have been conducted in Wisconsin's primary quail range (Figure 1) since the summer of 1949. The number of routes run in 2013 was 24, the same as in 2011. The number of whistling males per stop was up slightly in 2013 at 0.015 whistles per stop, up from 0.013 in 2011 (Figure 2.). The number of whistling males per stop remained well below the long-term average of 0.54.

Winter temperatures for the winters of 2011-2012 and 2012-13 were above average, with the winter temps in 2011-12 much above average. Precipitation and snow depth generally below average in 2011-12 and more normal for the winter of 2012-13. Also, the spring weather conditions for 2011 and 2012 were close to average for temperatures and rain fall during the critical first few weeks of brood rearing. Hard winters and cool wet springs can have a negative impact on bobwhite quail populations in the state.

In general, the continued declines of bobwhite quail in Wisconsin and nation-wide reflect factors beyond weather conditions. Such causative factors are thought to include habitat deterioration, predation, and possibly pesticides. Continued losses of grass lands and changes in land use threaten the future of quail populations in Wisconsin.

Surveyors were also instructed to record all cottontail rabbits seen while on the survey route. The numbers of cottontail rabbits seen per transect increased 22%, from 2.8 in 2011 to 3.4 in 2013. This increase was not significant ($p=0.67$) and was still lower than it has been in several decades (Figure 3.). The outlook for rabbits seems to be better then quail. The trend for rabbit numbers is stable in the long term.

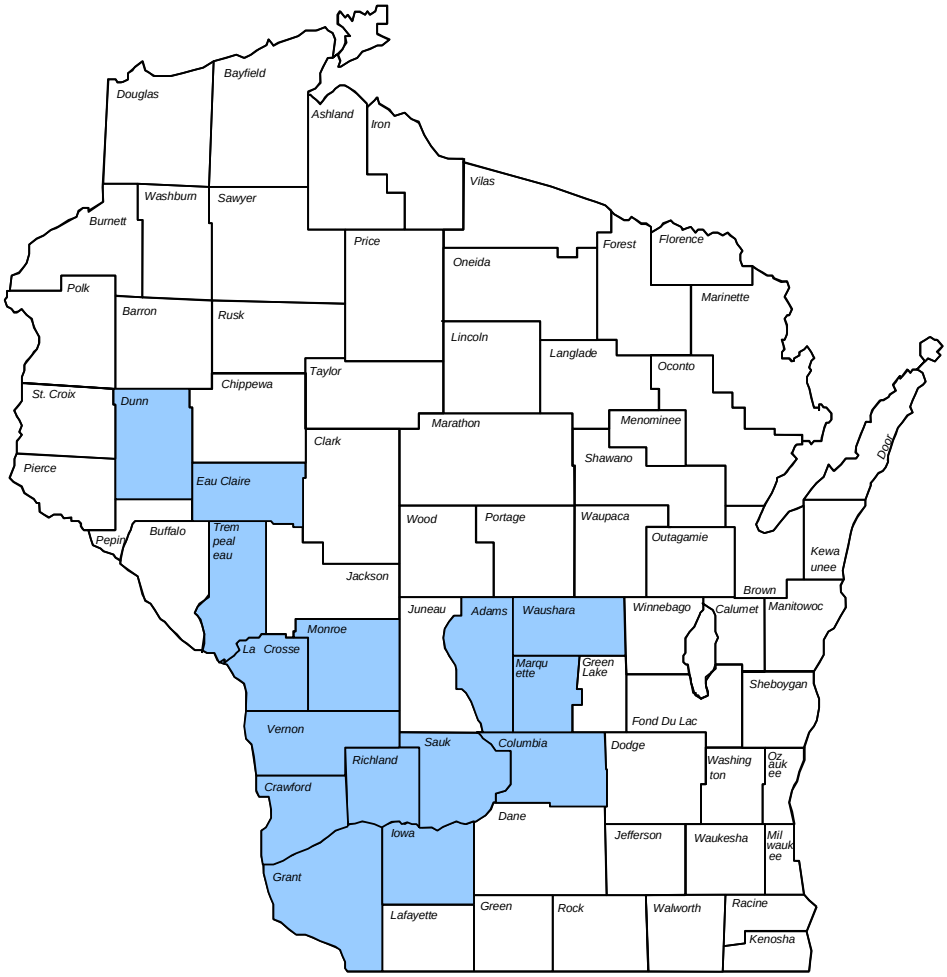

Figure 1. *Shaded counties comprise Wisconsin's primary bobwhite quail range.*

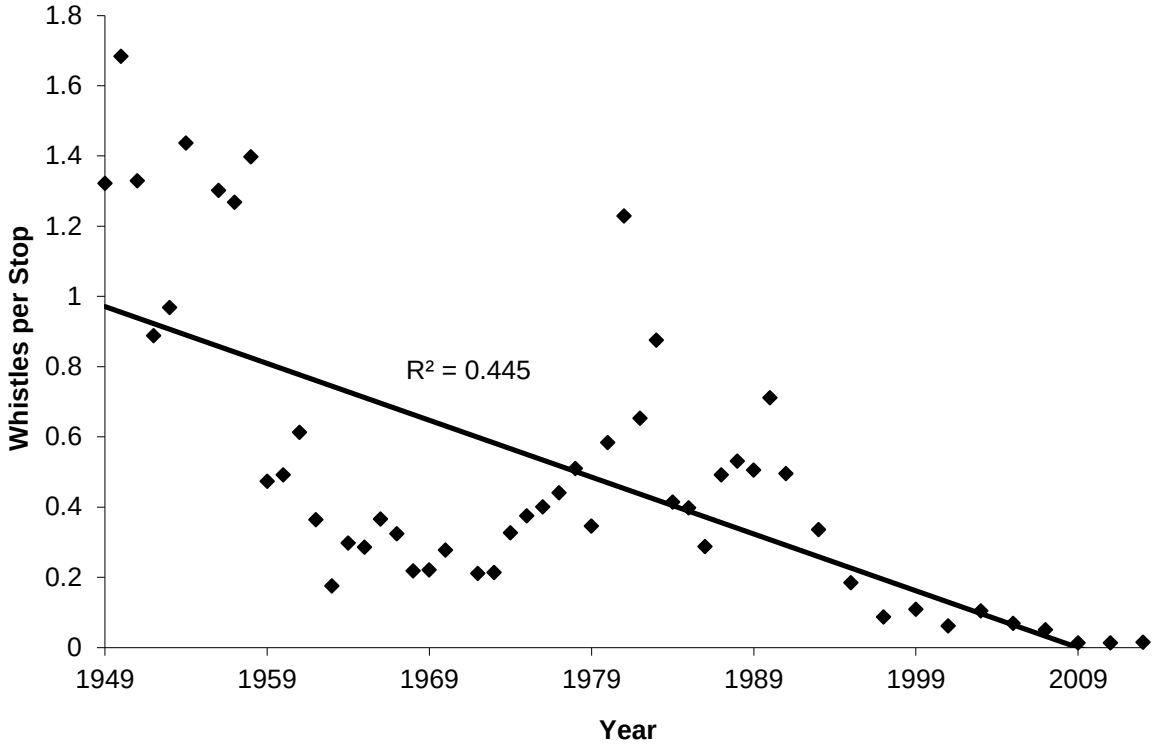

Figure 2. *Mean number of whistling males heard per stop 1949-2013.*

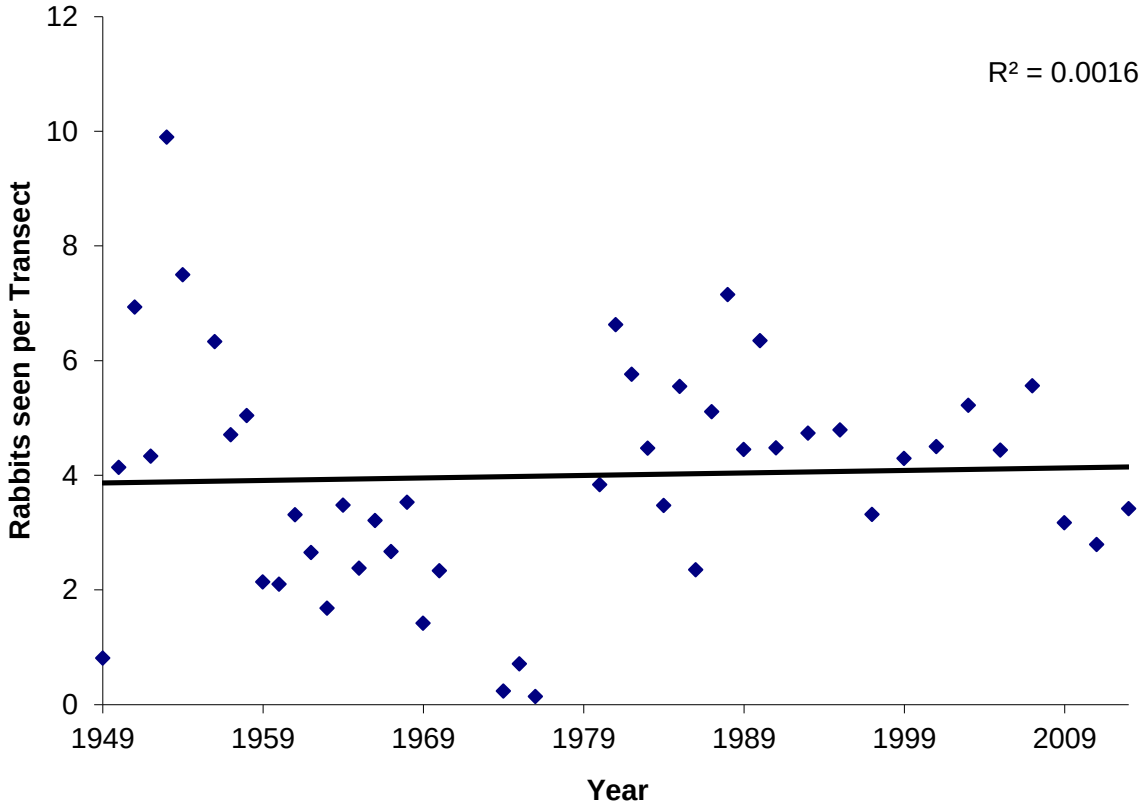

Figure 3. *Number of rabbits seen per quail transect 1949-2013.*